



SEQUENCE LISTING

<110> CROSSMAN, DAVID C.
DUFF, GORDON W.
FRANCIS, SHEILA E.
KORNMAN, KENNETH S.
STEPHENSON, KATHERINE

<120> DIAGNOSTICS AND THERAPEUTICS FOR RESTENOSIS

<130> 24299-514CIP2A DIV

<140> 10/823,197

<141> 2004-04-12

<150> 09/578,534

<151> 2000-05-24

<150> 09/431,352

<151> 1999-11-01

<160> 29

<170> PatentIn Ver. 2.1

<210> 1

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 1

atggtttttag aaatcatcaa gcctagggca

30

<210> 2

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 2

aatgaaagga ggggaggatg acagaaatgt

30

<210> 3

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 3
tggcattgat ctggttcac
20

<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 4
gttttaggaat cttcccactt
20

<210> 5
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 5
ctcaggtgtc ctcgaagaaa tcaaa
25

<210> 6
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 6
gcttttttgc tgtgagtc
21

<210> 7
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 7
ctcagcaaca ctcctat
17

<210> 8
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

 <400> 8
 tcctggtctg cagctaa 17

 <210> 9
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 9
 ctatctgagg aacaaccaac tagtagc 27

 <210> 10
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 10
 taggacattg cacctagggt ttgt 24

 <210> 11
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 11
 atttttttat aaatcatcaa gcctagggca 30

 <210> 12
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 12
 aattaaagga gggaagaatg acagaaatgt 30

 <210> 13
 <211> 27

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 13
aagcttggttc taccacctga actaggc 27

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 14
ttacatatga gccttccatg 20

<210> 15
<211> 11970
<212> DNA
<213> Homo sapiens

<400> 15
aagctttctac cctagctctgg tgcctacactt acattgctta catccaagtg tgggtatttcc 60
tgtggctcct gttataacta ttatagcacc aggtctatga ccaggagaat tagactggca 120
ttaaatcaga ataagagatt ttgcacctgc aatagacctt atgacaccta accaaccacca 180
ttattttacaa ttaaacagga acagagggaa tactttatcc aactcacaca agctgttttc 240
ctcccagatc catgcttttt tgcgtttatt attttttaga gatgggggct tcactatggt 300
gccccacatg gactaaaact ctgggcctca agtgattgtc ctgcctcagc ctccctgaata 360
gctgggacta caggggcatg ccatcacacc tagttcattt cctctattta aaatatacat 420
ggctttaaact ccaactggga acccaaaaaca ttcatttgct aagagtctgg tgttctacca 480
cctgaactag gctggccaca ggaattataa aagctgagaa attctttaat aatagtaacc 540
aggcaacatc attgaaggct catatgtaaa aatccatgcc ttcctttctc ccaatctcca 600
ttcccaaact tagccactgg ttctggctga ggccttacgc atacctcccg gggcttgca 660
acaccttctt ctacagaaga cacaccttgg gcatatccta cagaagacca ggcttctctc 720
tggtccttgg tagagggcta ctttactgta acagggccag ggtggagagt tctctcctga 780
agctccatcc cctctatagg aaatgtgttg acaatattca gaagagtaag aggatcaaga 840
cttctttgtg ctcaaatacc actgttctct tctctaccct gccctaacca ggagcttgct 900
accccaaact ctgaggtgat ttatgcctta atcaagcaaa cttccctctt cagaaaagat 960
ggctcatttt ccctcaaaag ttgccaggag ctgccaaagta ttctgccaat tcaccctgga 1020
gcacaatcaa caaattcagc cagaacacaa ctacagctac tattagaact attattatta 1080
ataaatctct ctccaaatct agcccttga cttcggattt cacgatttct cccttctctc 1140
tagaaacttg ataagtttcc cgcgcttccc tttttctaag actacatggt tgtcatctta 1200
taaagcaaaag ggggtgaataa atgaacaaa tcaataaact ctggaatata tgcaaacac 1260
aataatatca gctatgccat ctttactat tttagccagt atcgagttga atgaacatag 1320
aaaaatacaa aactgaattc ttccctgtaa attccccgtt ttgacgacgc acttgtagcc 1380
acgtagccac gcctacttaa gacaattaca aaaggcgaag aagactgact caggcttaag 1440
ctgccagcca gagagggagt catttcattg gcgtttgagt cagcaaagggt attgtcctca 1500
catctctggc tattaaagta tttctctgtt ttgtttttct ctttggtgtt tttctctcac 1560
attgccttct ctaaagctac agtctctcct ttcttttctt gtccctccct gggttggtat 1620
gtgacctaga attacagtca gatttcagaa aatgattctc tcattttgct gataaggact 1680
gattcgtttt actgagggac ggcagaacta gtttcctatg agggcatggg tgaataacaac 1740

tgaggcttct	catgggaggg	aatctctact	atccaaaatt	attaggagaa	aattgaaaat	1800
ttccaaactct	gtctctctct	tacctctgtg	taaggcaaat	accttattct	tgtgggtgtt	1860
ttgtaacctc	ttcaaacttt	cattgattga	atgcctgttc	tggcaatata	ttagggtggg	1920
cacataagga	ataccaacat	aaataaaaca	ttctaaaaga	agttttacgat	ctaataaagg	1980
agacagggtac	atagcaaact	aattcaaagg	agctagaaga	tggagaaaat	gctgaatgtg	2040
gactaagtca	ttcaacaaag	ttttcaggaa	gcacaaagag	gaggggctcc	cctcacagat	2100
atctggatta	gaggctggct	gagctgatgg	tggctgggtg	tctctgttgc	agaagtcaag	2160
atggccaaag	ttccagacat	gtttgaagac	ctgaagaact	gttacaggta	aggaataaga	2220
tttatctctt	gtgatttaat	gagggtttca	aggctcacca	gaatccagct	aggcataaca	2280
gtggccagca	tgggggcagg	cgggcagagg	ttgtagagat	gtgtactagt	cctgaagtca	2340
gagcagggttc	agagaagacc	cagaaaaact	aagcattcag	catgttaaac	tgagattaca	2400
ttggcaggga	gaccgccatt	ttagaaaaat	tattttttgag	gtctgctgag	ccctacatga	2460
atatcagcat	caacttagac	acagcctctg	ttgagatcac	atgccctgat	ataagaatgg	2520
gttttactgg	tccatttctca	ggaaaacttg	atctcattca	ggaacaggaa	atggctccac	2580
agcaagctgg	gcatgtgaac	tcacatatgc	aggcaaactct	cactcagatg	tagaagaaag	2640
gtaaatgaac	acaaagataa	aattacggaa	catattaaac	taacatgatg	tttccattat	2700
ctgtagttaa	tactaacaca	aactaggctg	tcaaaaatttt	gcctggatat	tttactaagt	2760
ataaattatg	aaatctgttt	tagtgaatac	atgaaagtaa	tgtgtaacat	ataatctatt	2820
tggttaaaat	aaaaaggaag	tgcttcaaaa	cctttctttt	ctctaaagga	gcttaacatt	2880
cttccctgaa	cttcaattaa	agctcttcaa	tttgtttagcc	aagtccaatt	tttacagata	2940
aagcacagggt	aaagctcaaa	gcctgtcttg	atgactacta	attccagatt	agtaagatat	3000
gaattactct	acctatgtgt	atgtgtagaa	gtccttaaat	ttcaaagatg	acagtaatgg	3060
ccatgtgtat	gtgtgtgacc	cacaactatc	atggctatta	aagtacattg	gccagagacc	3120
acatgaaata	acaacaatta	cattctctatc	atcttatttt	gacagtgaag	atgaagaaga	3180
cagttcctcc	attgatcatc	tgtctctgaa	tcaggtaagc	aatgactgtg	aattctcatg	3240
ggactgctat	tcttacacag	tggtttcttc	atccaaagag	aacagcaatg	acttgaatct	3300
taaatacttt	tgttttaccc	tcactagaga	tccagagacc	tgtctttcat	tataagttag	3360
accagctgcc	tctctaaact	aatagttgat	gtgcattggc	ttctcccaga	acagagcaga	3420
actatcccaa	atccctgaga	actggagtct	cctggggcag	gcttcatcag	gatgttagtt	3480
atgccatcct	gagaaaagccc	cgcaggccgc	ttcaccagggt	gtctgtctcc	taacgtgatg	3540
tgttgtgggt	gtcttctctg	acaccagcat	cagaggttag	agaaagtctc	caaacatgaa	3600
gctgagagag	aggaagcaag	ccagctgaaa	gtgagaagtc	tacagccact	catcaatctg	3660
tgttattgtg	tttgagagacc	acaaatagac	actataagta	ctgcctagta	tgtcttcagt	3720
actggcttta	aaagctgtcc	ccaaaggagt	atttctaaaa	tattttgagc	attgttaagc	3780
agatttttaa	cctcctgaga	gggaactaat	tggaaagcta	ccactcacta	caatcattgt	3840
taacctatct	agttacaaca	tctcattttt	gagcatgcaa	ataaatgaaa	aagtcttcct	3900
aaaaaaaaatca	tctttttatc	ctggaaggag	gaaggaagggt	gagacaaaag	ggagagaggg	3960
agggaagcct	aatgaaacac	cagttacctt	agaccagaat	ggagatcctc	ctcactacct	4020
ctgttgaata	cagcacctac	tgaagaagac	ttcattccct	gaccatgaac	agcctctcag	4080
cttctgtttt	ccttctctac	agaaatcctt	ctatcatgta	agctatggcc	cactccatga	4140
aggctgcatg	gatcaatctg	tgtctctgag	tatctctgaa	acctctaaaa	catccaagct	4200
taccttcaag	gagagcatgg	tggtagtagc	aaccaacggg	aagggttctga	agaagagacg	4260
gttgagttaa	agccaatcca	tcactgatga	tgacctggag	gccatcgcca	atgactcaga	4320
ggaaggtaag	gggtcaagca	caataatatc	tttcttttac	agtttttaagc	aagtagggac	4380
agtagaattt	aggggaaaat	taaacgtgga	gtcagaataa	caagaagaca	accaagcatt	4440
agtctggtaa	ctatacagag	gaaaattaat	ttttatcctt	ctccaggagg	gagaaatgag	4500
cagtggcctg	aatcgagaat	acttgctcac	agccattatt	tcttagccat	attgtaaagg	4560
tcgtgtgact	tttagccttt	caggagaaaag	cagtaataag	accacttacg	agctatgttc	4620
ctctcatact	aactatgcct	ccttggtcat	gttacataat	cttttctgtga	ttcagtttcc	4680
tctactgtaa	aatggagata	atcagaatcc	cccactcatt	ggattgttgt	aaagatttaag	4740
agtctcaggc	tttacagact	gagctagctg	ggcctcctg	actgttataa	agattaaatg	4800
agtcaacatc	ccctaacttc	tggactagaa	taatgtctgg	tacaaagtaa	gcaccaataa	4860
aatgttagct	attactatca	ttattattat	tatttttatt	tttttttttg	agatggagtc	4920
tggctctgtc	accaggctg	gagtgacgtg	gcacaatctc	ggctcactgc	aagctctgcc	4980
tcctgggttc	atgccattct	cctgcctcag	cctcccgagt	aagctgggaa	tacaggcacc	5040
cgccactgtt	ccgggctaatt	tttttgtatt	tttagtagag	acggagtctt	accgtgggtct	5100
ccatctcctc	gtgatccacc	caccttggcc	tcccaaagtg	ccgggattac	aggcgtgagc	5160

caccgcgccc	ggcctattat	tattattatt	actactacta	ctacctatat	gaatactacc	5220
agcaatacta	at ttattaat	gactggatta	tgtctaaacc	tcacaagaat	cctaccttct	5280
cattttacat	aaaaggaaac	taagctcatt	gagataggta	aactgcccac	tggcatacat	5340
ctgtaagtgg	gagagcctca	aatctaattc	agttctacct	gagtaaaaaa	atcatggttt	5400
ctcctccatc	cctttactgt	acaagcctcc	acatgaacta	taaacccaat	attcctgttt	5460
ttaagataat	acctaagcaa	taacgcatgt	tcacctagaa	ggtttttaaaa	tgtaacaaaa	5520
tataagaaaa	taaaaatcac	tcatatcgtc	agtgagagtt	tactactgcc	agcactatgg	5580
tatgtttcct	taaaatcttt	gctatacaca	tacctacatg	tgaacaaata	tgtctaacat	5640
caagaccaca	ctattttacaa	ctttatatcc	agctttttctt	acttagcaat	gtattgagga	5700
catttttagag	tgcccgtttt	tcaccattat	aagcaatgca	acaatgaaca	tctgtataaa	5760
taaatattca	tttctctcac	cctttatttc	cttagaatat	attcctagaa	gtagaatttc	5820
ccagagccat	gaggatttgt	gacgctattg	atatgtgcc	ctttgcactc	tctgtgacat	5880
atataattat	ttttaatgca	ttcatttttt	tctcagagtg	cattcgtttg	aaaacataga	5940
cgggaaatac	tggtagtctt	ccttgtcagt	tagaaacacc	caaacaatga	aaaatgaaaa	6000
agttgcacaa	atagtctcta	aaaacaatga	aactattgcc	tgaggaattg	aagtttaaaa	6060
agaagcaca	aagcaacaac	aaggataatc	ctagaaaacc	agttctgctg	actgggtgat	6120
ttcacttctc	tttgcttctc	catctggatt	ggaatatctc	taataccccc	tccagaacta	6180
ttttccctgt	ttgtactaga	ctgtgtatat	catctgtgtt	tgtacataga	cattaatctg	6240
cacttgtgat	catggtttta	gaaatcatca	agcctaggtc	atcacctttt	agcttcctga	6300
gcaatgtgaa	atacaacttt	atgaggatca	tcaaatacga	attcatcctg	aatgacgccc	6360
tcaatcaaag	tataattcga	gccaatgatc	agtacctcac	ggctgctgca	ttacataatc	6420
tggatgaagc	aggtacatta	aaatggcacc	agacatttct	gtcatcctcc	cctcctttca	6480
tttacttatt	tattttatttc	aatctttctg	cttgcaaaaa	acatacctct	tcagagttct	6540
gggttgcaca	attctttccag	aatagcttga	agcacagcac	ccccataaaa	atcccaagcc	6600
agggcagaag	gttcaactaa	atctggaagt	tccacaagag	agaagtttcc	tatctttgag	6660
agtaaagggg	tgtgcacaaa	gctagctgat	gtactacctc	tttgggtctt	tcagacattc	6720
ttaccctcaa	ttttaaaact	gaggaaactg	tcagacatat	taaatgattt	actcagattt	6780
accagaagc	caatgaagaa	caatcactct	ccttttaaaaa	gtctgttgat	caaactcaca	6840
agtaacacca	aaccaggaag	atctttatta	tctctgataa	catattttgtg	aggcaaaaacc	6900
tccaataagc	tacaaatatg	gcttaaagga	tgaagtttag	tgtccaaaaa	cttttatcac	6960
acacatccaa	ttttcatggc	ggacatgttt	tagtttcaac	agtatacata	ttttcaaagg	7020
tccagagagg	caatttttgc	ataaacaagc	aagacttttt	ctgattggat	gcacttcagc	7080
taacatgctt	tcaactctac	attttacaaat	tattttgtgt	tctatttttc	tacttaatat	7140
tatttctgca	attttcccaa	tattgacatc	gtgtatgtat	ttgccatttt	taatatcact	7200
agacaattca	atcaggttgc	tacgttggtc	ccttgggttt	actctaaata	gcttgattgc	7260
aaatatcttt	gtatatatta	ttgttttttc	tcctatcttg	taattttctt	gagcacatcc	7320
caaagaggaa	tgcctagatc	aatgggcaca	aataatttga	cagctcttat	taaacattat	7380
tctgtaagta	aaaactgaac	tacttttcag	tatcactagc	aacatatgag	tgtatcagct	7440
tcctaaaccc	ctccatgtta	ggtcattatg	aacttatgat	ctaacaaatt	acaggggtctt	7500
atcccactaa	tgaattata	agagattcaa	cacttattca	gccccgaagg	attcattcaa	7560
cgtagaaaat	tctaagaaca	ttaaccaagt	atttacctgc	ctagtgagtg	tggaagacat	7620
tgtgaaggac	acaaagatgt	atagaattcc	attcctgact	tccaggtatt	tacaccatag	7680
gtggggacct	aactacacac	acacacacac	acacacacac	acacacacac	accatgcaca	7740
cacaatctac	atcaacactt	gattttatac	aaatacaatg	aattttacttt	ctttttgggtt	7800
cttctcttca	ccagtgaat	ttgacatggg	tgtttataag	tcatacaaagg	atgatgctaa	7860
aattaccgtg	attctaagaa	tctcaaaaac	tcaattgtat	gtgactgcc	aagatgaaga	7920
ccaaccagtg	ctgctgaagg	tcagttgtcc	tttgtctcca	acttaccttc	atttacatct	7980
catatgtttg	taaataagcc	caataggcag	acacctctaa	caaggtgaca	ctgtcctctt	8040
tccttccctac	cacagccccc	acctaccac	cccactccca	ttgattccag	aggcgtgcct	8100
aggcaggatc	tatgagaaaa	tataacagag	agtaagagga	aaattacctt	ctttcttttt	8160
cctttccctg	cctgacctta	ttcacctccc	atcccagagc	atccatttat	tccattgatc	8220
tttactgaca	tctattatct	gacctacaca	atactagaca	ttaggacaat	gtggcctgcc	8280
tccaagaaac	tcaaataagc	caactgagat	cagagaggat	taatcacctg	ccaatgggca	8340
caaagcaaca	agctgggagc	caagtcccaa	aatggggcct	gctgcttcca	gttccccctc	8400
ctctgcattg	atgtcagcat	tatccttcgt	cccagtcctg	tctccactac	cactttcccc	8460
ctcaaacaca	cacacacaca	acagccttag	atgtttttctc	cactgataag	taggtgactc	8520
aatttgtaag	tatataatcc	aagaccttct	attcccaagt	agaatttatg	tgcctgcctg	8580

tgcttttcta	cctggatcaa	gtgatgtcta	cagagtaggg	cagtagcttc	attcatgaac	8640
tcattcaaca	agcattattc	actgagagcc	ttgtattttt	caggcatagt	gccaacagca	8700
gtgtggacag	tggtgcatca	aagcctctag	tctcatagaa	cttagtcttc	tggaggatat	8760
ggaaaacaga	caacccaaac	aaccaacaaa	agagcaagat	gctgcaaaaa	aaaaaaaaat	8820
gaataggggtg	ctaagataga	gaaaagtggg	agagtgtctat	ttagacaaaag	tggtaaaaaac	8880
aaagcccctt	gtgagatgag	agctgccgac	agagggggcg	ggcatgggtt	gtgggttttt	8940
gggtaggaca	ttcagaggag	ggggcgggtc	gtgggtgtgg	gtttttgggt	aggacattca	9000
gaggaggggg	cgggtcgtgg	ttgtgggttt	ttgggtagga	cattcagagg	agggggcggg	9060
tcgtgggtgt	gggttttttg	gtaggacatt	cagaggaggg	ggcgggtcgt	ggttgtgggt	9120
ttttgggaca	ttcagaggag	tctgaatgca	cccaggccta	caacttcaag	atggtaaagg	9180
acagctccaa	ggatcagaag	aagcattctt	ggaactgggg	catttttgaga	aggaggaaaa	9240
atatgcagag	actagtgtct	gcagagcttg	cattttggatt	tcatttgagg	tacaatgaaa	9300
acccattaat	gggtttcaca	cagtgcgaatg	gcctgacctc	acttatattt	cctaaaatag	9360
aaaacagatc	agaaggaagg	caatagagaa	gcagaaagtc	caatgaggag	gtttcacagc	9420
agtcatgggg	gtggggtaag	gaaaagaagt	ggaaagaaac	agacagaatt	gggttatatt	9480
ttggagatag	aaccaacaga	aggaagagga	gaaacaacat	ttactgagaa	gggaaaaagt	9540
aggagaggaa	taggtttggg	aaataaatcc	tgctgacatt	ggaaaccca	aggaagcctc	9600
aaaagtatat	ttacttgctt	tagattttaa	agaataggaa	agaagcatct	caacttggaa	9660
tttgaaatct	atttttccat	aaaagtattg	ttaaattcta	ctcatactca	caagaaaagt	9720
acatttctaaa	gagtatatgt	aaagagttta	ctgatatact	taggaatttt	gtgtgtatgt	9780
gtgtgtgtgt	atgtgtgtgt	gtgtgtttta	ccttcaattg	ttgacttaaa	tactgagata	9840
aatgtcatct	aaatgctaaa	ttgatttccc	aaaggatga	tttgttcact	tggagatcaa	9900
aatgtttagg	gggcttagaa	tactgtagt	gctcagattt	gatgcaaaat	gtcttaggcc	9960
tatgttgaag	gcaggacaga	aacaatgttt	ccctcctacc	tgcttgata	cagtaagata	10020
ctagtgtcac	tgacaatctt	cataactaat	ttagatctct	ctccaatcaa	ctaaggaaat	10080
caactcttat	taatagactg	ggccacacat	ctactaggca	tgtataaat	gcttgctgaa	10140
tgaacaaatg	aatgaagagc	ctatagcatc	atgttacagc	catagtccta	aagtgggtgt	10200
tctcatgaag	gccaaatgct	aagggtattga	gcttcagtcc	tttttctaac	atcttgttct	10260
ctaacagaat	tctcttcttt	tcttcatagg	agatgcctga	gatacccaaa	accatcacag	10320
gtagtgagac	caacctcctc	ttcttctggg	aaactcacgg	cactaagaac	tatttcacat	10380
cagttgccca	tccaaacttg	tttattgcca	caaagcaaga	ctactgggtg	tgcttggcag	10440
ggggggccacc	ctctatcact	gactttcaga	tactggaaaa	ccaggcgtag	gtctggagtc	10500
tcacttgtct	cacttgtgca	gtgttgacag	ttcatatgta	ccatgtacat	gaagaagcta	10560
aatcctttac	tgtttagtcat	ttgctgagca	tgtactgagc	cttgtaattc	taaatgaatg	10620
tttacactct	ttgtaagagt	ggaaccaaca	ctaactata	atgttgttat	ttaaagaaca	10680
ccctatatatt	tgcatagtag	caatcatttt	aattattatt	cttcataaca	attttaggag	10740
gaccagagct	actgactatg	gctacaaaaa	agactctacc	catattacag	atgggcaaat	10800
taaggcataa	gaaaactaag	aaatatgcac	aatagcagtt	gaaacaagaa	gccacagacc	10860
taggatttca	tgattttcatt	tcaactgttt	gccttctgct	tttaagttgc	tgatgaactc	10920
ttaatcaaat	agcataagtt	tctgggacct	cagttttatc	attttcaaaa	tggagggaat	10980
aatacctaag	ccttcctgcc	gcaacagttt	tttatgctaa	tcagggaggt	catttttggt	11040
aaatacttct	cgaagccgag	cctcaagatg	aaggcaaagc	acgaaatgtt	attttttaat	11100
tattattttat	atatgtatatt	ataaatatat	ttaagataat	tataatatac	tatatttatg	11160
ggaacccctt	catcctctga	gtgtgaccag	gcctcctcca	caatagcaga	cagtgttttc	11220
tgggataagt	aagtttgatt	tcattaatac	agggcatttt	ggtccaagtt	gtgcttatcc	11280
catagccagg	aaactctgca	ttctagtact	tgggagacct	gtaatcatat	aataaatgta	11340
cattaattac	cttgagccag	taattgggtc	gatctttgac	tcttttgcca	ttaaacttac	11400
ctgggcattc	ttgtttcatt	caattccacc	tgcaatcaag	tcctacaagc	taaaattaga	11460
tgaactcaac	tttgacaacc	atgagaccac	tgttatcaaa	actttctttt	ctggaatgta	11520
atcaatgttt	cttctaggtt	ctaaaaattg	tgatcagacc	ataatgttac	attattatca	11580
acaatagtga	ttgatagagt	gttatcagtc	ataactaaat	aaagcttgca	acaaaattct	11640
ctgacacata	gttattcatt	gccttaatca	ttattttact	gcatggtaat	tagggacaaa	11700
tggtaaatgt	ttacataaat	aattgtattt	agtgttactt	tataaaatca	aaccaagatt	11760
ttatattttt	ttctcctctt	tgttagctgc	cagtatgcac	aaatggcatt	aagaatgata	11820
atattttccg	gttcacttaa	agctcatatt	acacatacac	aaaacatgtg	ttcccatctt	11880
tatacaaaact	cacacataca	gagctacatt	aaaaacaact	aataggccag	gcacgggtggc	11940
tcagacctgt	aatcccagca	ctttgggagg				11970

<210> 16
 <211> 9721
 <212> DNA
 <213> Homo sapiens

<220>
 <221> modified_base
 <222> (135)..(136)
 <223> a, t, c, g, other or unknown

<400> 16
 agaaagaaag agagagagaa agaaaagaaa gaggaaggaa ggaaggaagg aagaaagaca 60
 ggctctgagg aaggtggcag ttctacaac gggagaacca gtggttaatt tgcaaagtgg 120
 atcctgtgga ggcanncaga ggagtcacct aggccaccca gacagggtt ttagctatct 180
 gcaggccaga caccaaattt caggagggtc cagtgttagg aatggattat ggcttatcaa 240
 attcacagga aactaacatg ttgaacagct tttagatttc ctgtggaaaa tataacttac 300
 taaagatgga gttcttgtga ctgactcctg atatcaagat actgggagcc aaattaaaaa 360
 tcagaaggct gcttggagag caagtccatg aaatgctctt tttcccacag tagaacctat 420
 ttccctcgtg tctcaaatac ttgcacagag gctcactccc ttggataatg cagagcgagc 480
 acgatacctg gcacatacta atttgaataa aatgctgtca aattccatt caccatttca 540
 agcagcaaac tctatctcac ctgaatgtac atgccaggca ctgtgctaga cttggctcaa 600
 aaagatttca gtttcttgga ggaaccagga gggcaagggt tcaactcagt gctataagaa 660
 gtgttacagg ctggacacgg tggctcacgc ctgtaatccc aacatttggg aggccgaggc 720
 gggcagatca caaggtcagg agatcgagac catcctggct aacatggtga aaccctgtct 780
 ctactaaaaa tacaaaaaat tagccgggcg ttggcggcag gtgcctgtag tcccagctgc 840
 tggggagggt gaggcaggag aatggtgtga acccgggagg cggaacttgc agggggccga 900
 gatcgtgcca ctgactcca gcctgggcca cagagtgaga ctctgtctca aaaaaaaaaa 960
 aaaagtgtta tgatgcagac ctgtcaaaga ggcaaaggag ggtgttccca cactccaggc 1020
 actgttcata acctggactc tcattcattc taaaaatgga gggctccctt gggcagatcc 1080
 ctggagcagg cactttgctg gtgtctcggt taaagagaaa ctgataactc ttggtattac 1140
 caagagatag agtctcagat ggatattctt acagaaacaa tattcccact tttcagagtt 1200
 caccataaaa tcatttttagg cagagctcat ctggcattga tctggttcat ccatgagatt 1260
 ggctagggtg acagcacctg gtcttgacag gttgtgtgag cttatctcca ggggtgcccc 1320
 aactccgtca ggagcctgaa ccctgcatac cgtatgttct ctgccccagc caagaaagggt 1380
 caattttctc ctgagaggct cctgcaattg acagagagct cccgaggcag agaacagcac 1440
 ccaaggtaga gaccacacc ctcaatacag acagggaggg ctattggccc ttcattgtac 1500
 ccatttatcc atctgtaagt gggaagattc ctaaaactta gtacaaagaa gtgaatgaag 1560
 aaaagtatgt gcatgtataa atctgtgtgt cttccacttt gtcccacata tactaaattt 1620
 aaacattctt ctaacgtggg aaaatccagt attttaattg ggacatcaac tgcacaacga 1680
 ttgtcaggaa aacaatgcat atttgcatgg tgatacattt gcaaaatgtg tcatagtttg 1740
 ctactccttg cccttccatg aaccagagaa ttatctcagt ttattagtcc cctcccctaa 1800
 gaagcttcca ccaatactct tttccccttt cctttaactt gattgtgaaa tcagggtattc 1860
 aacagagaaa tttctcagcc tcctacttct gcttttgaaa gctataaaaa cagcgaggga 1920
 gaaactggca gataccaaac ctcttcgagg cacaaggcac aacaggctgc tctgggattc 1980
 tcttcagcca atcttcattg ctcaagtatg actttaatct tccttacaac taggtgctaa 2040
 gggagtctct ctgtctctct gcctctttgt gtgtatgcat attctctctc tctctctctt 2100
 tctttctctg tctctctctc ccttctctct tgccctctct ctgagctttt tgcaaaaatg 2160
 ccagggtgaa tataatgctt atgactcggg aaatattctg ggaatggata ctgcttatct 2220
 aacagctgac accctaaagg ttagtgtcaa agcctctgct ccagctctcc tagccaatac 2280
 attgctagtt ggggtttggt ttagcaaatg ctttttctca gacccaaagg acttctcttt 2340
 cacacattca ttcatttact cagagatcat ttttttgcac gactgccatg cactggatgc 2400
 tgagagaaat cacacatgaa cgtagccgtc atggggaagt cactcatttt ctccttttta 2460
 cacagggtgc tgaagcagcc atggcagaag tacctgagct cgccagtgaa atgatggctt 2520
 attacaggtc agtggagacg ctgagaccag taacatgagc aggtctctct tttcaagagt 2580
 agagtgttat ctgtgcttgg agaccagatt tttcccctaa attgcctctt tcagtggcaa 2640

acaggggtgcc	aagtaaatct	gatttaaaga	ctactttccc	attacaagtc	cctccagcct	2700
tgggacctgg	aggctatcca	gatgtgttgt	tgcaggggct	tcctgcagag	gcaaattgggg	2760
agaaaagatt	ccaagccac	aatacaagga	atccctttgc	aaagtgtggc	ttggagggag	2820
aggagagct	cagattttag	ctgactctgc	tgggctagag	gttaggcctc	aagatccaac	2880
agggagcacc	agggtgcccc	cctgccaggc	ctagaatctg	ccttctggac	tgttctgcgc	2940
atatcactgt	gaaacttgcc	agggtgtttca	ggcagctttg	agaggcaggc	tgtttgcagt	3000
ttcttatgaa	cagtcagtc	ttgtacacag	ggaaggaaaa	ataaacctgt	ttagaagaca	3060
taattgagac	atgtccctgt	ttttattaca	gtggcaatga	ggatgacttg	ttctttgaag	3120
ctgatggccc	taaacagatg	aaggtaagac	tatgggttta	actcccaacc	caaggaaggg	3180
ctctaacaca	gggaaagctc	aaagaaggga	gttctggggc	actttgatgc	catggtattt	3240
tgttttagaa	agactttaac	ctcttccagt	gagacacagg	ctgcaccact	tgctgacctg	3300
gccacttggg	catcatatca	ccacagtcac	tcactaacgt	tgggtggtgg	ggccacactt	3360
gggtggtgaca	ggggaggagt	agtgataatg	ttcccatttc	atagtaggaa	gacaaccaag	3420
tcttcaacat	aaatttgatt	atccttttaa	gagatggatt	cagcctatgc	caatcacttg	3480
agttaaactc	tgaaccaag	agatgatctt	gagaactaac	atatgtctac	cccttttgag	3540
tagaatagtt	ttttgctacc	tgggggtgaag	cttataacaa	caagacatag	atgatataaa	3600
caaaaagatg	aattgagact	tgaagaaaaa	ccattcactt	gctgtttgac	cttgacaagt	3660
cattttaccc	gctttggacc	tcacttgaaa	aataaagggc	tgagctggat	gatctctgag	3720
attccagcat	cctgcaacct	ccagttctga	aatattttca	gttgtagcta	agggcatttg	3780
ggcagcaaat	ggtcattttt	cagactcatc	cttacaaga	gccatgttat	attcctgctg	3840
tcccttctgt	tttatatgat	gctcagtagc	cttccatagg	gcccagccat	cagcctagct	3900
aggtcagttg	tgcaggttgg	aggcagccac	ttttctctgg	ctttatttta	ttccagtttg	3960
tgatagcctc	ccctagcctc	ataatccagt	cctcaatctt	gttaaaaaa	tatttcttta	4020
gaagttttaa	gactggcata	acttcttggc	tgcagctgtg	ggaggagccc	attggccttg	4080
ctgcctggcc	tttgccccc	attgcctctt	ccagcagctt	ggctctgctc	caggcaggaa	4140
attctctcct	gctcaacttt	cttttgtgca	cttacaggtc	tctttaactg	tctttcaagc	4200
ctttgaacca	ttatcagcct	taaggcaacc	tcagtgaagc	cttaatacgg	agcttctctg	4260
aataagagga	aagtggtaac	atttcacaaa	aagtactctc	acaggatttg	cagaatgcct	4320
atgagacagt	gttatgaaaa	aggaaaaaaa	agaacagtgt	agaaaaattg	aataacttgct	4380
gagtgagcat	agggtgaatg	aaaatgttat	ggtcactctg	atgaaaaagc	aaatcatagt	4440
gtgacagcat	tagggatata	aaaagatata	gagaagggtat	acatgtatgg	tgtagggtgg	4500
gcatgtacaa	aaagatgaca	agtagaatcg	ggattttatt	taaagaatag	cctgtaagg	4560
gtccagaagc	cacattctag	tcttgagctc	gcctctacct	gctgtgtgcc	cttgagtaca	4620
cccttaacct	ccttgagctt	cagagagggga	taactttttt	attttatttt	attttatttt	4680
gttttgtttt	gttttgtttt	gttttatgag	acagagtctc	actctgttgc	ccaggctgga	4740
gtgcagtggt	acaatccttg	cttactgcat	cctccacctc	ctgagttcaa	gcgattctcc	4800
ttcctcagtc	tcctgaatat	ctaggattac	agggtgcacc	caccacaccc	agctaatttt	4860
tgtattttta	gtagagaagg	ggtttcgcca	tgttgccag	gctggttttg	aagtccctgac	4920
ctaaatgatt	catccacctc	ggcttcccaa	agtgtctggg	ttacaggcat	gagccaccac	4980
gcctggccca	gagagggatg	atcttttagaa	gctcgggatt	ctttcaagcc	ctttctctct	5040
ctctgagctt	tctactctct	gatgtcaaag	catggttctt	ggcaggacca	cctcaccagg	5100
ctccctccct	cgctctctcc	gcagtgtctc	ttccaggacc	tggacctctg	ccctctggat	5160
ggcggcatcc	agctacgaat	ctccgaccac	cactacagca	agggcttcag	gcaggcccg	5220
tcagttgttg	tggccatgga	caagctgagg	aagatgctgg	ttccctgccc	acagaccttc	5280
caggagaatg	acctgagcac	cttctttccc	ttcatctttg	aagaaggtag	ttagccaaga	5340
gcaggcagta	gatctccact	tgtgtcctct	tggaaagtcat	caagccccag	ccaactcaat	5400
tccccagag	ccaaagccct	ttaaaggtag	aaggcccagc	ggggagacaa	aacaaagaag	5460
gctggaaacc	aaagcaatca	tctctttagt	ggaaactatt	cttaagaag	atcttgatgg	5520
ctactgacat	ttgcaactcc	ctcactcttt	ctcaggggccc	tttcaacttac	attgtcacca	5580
gaggttcgta	acctccctgt	gggctagtgt	tatgaccatc	accatttttac	ctaagtagct	5640
ctgttgctcg	gccacagtga	gcagtaatat	acctgaagct	ggaacccatg	tctaatagtg	5700
tcagggtccag	tgttcttagc	caccccactc	ccagcttcat	ccctactggg	gttgtcatca	5760
gactttgacc	gtatatgtct	agggtgtcctc	caagaaatca	aattttgcca	cctcgccctca	5820
cgaggctcgc	ccttctgatt	ttatacctaa	acaacatgtg	ctccacattt	cagaacctat	5880
cttcttcgac	acatgggata	acgaggctta	tgtgcacgat	gcacctgtac	gatcactgaa	5940
ctgcacgctc	cgggactcac	agcaaaaaag	cttgggtgatg	tctgggtccat	atgaactgaa	6000
agctctccac	ctccagggac	aggatatgga	gcaacaagg	aatgggaaac	atcctggttt	6060

ccctgcctgg	cctcctggca	gcttgcta	tctccatg	ttaaacaaag	tagaaagtta	6120
atttaaggca	aatgatcaac	acaagtga	aaaaatatta	aaaaggaata	tacaaacttt	6180
ggtcctagaa	atggcacatt	tgattgcact	ggccagtga	tttgtaaca	ggagtgtgac	6240
cctgagaaat	tagacggctc	aagcactccc	aggaccatgt	ccacccaagt	ctcttgggca	6300
tagtgcagt	tcaattcttc	cacaatatgg	ggtcatttga	tggacatggc	ctaactgcct	6360
gtgggttctc	tcttcctg	gttgaggctg	aaacaagagt	gctggagcga	taatgtgtcc	6420
atccccctcc	ccagtcttcc	ccccctggcc	caacatccgt	cccacccaat	gccagggtgt	6480
tccttgtagg	gaaattttac	cgcccagcag	gaacttatat	ctctccgctg	taacgggcaa	6540
aagtttcaag	tgcggtgaac	ccatcattag	ctgtgggtgat	ctgcctggca	tcgtgccaca	6600
gtagccaaag	cctctgcaca	ggagtgtggg	caactaaggc	tgctgacttt	gaaggacagc	6660
ctcactcagg	gggaagctat	ttgctctcag	ccaggccaag	aaaatcctgt	ttctttggaa	6720
tcgggtagta	agagtgatcc	cagggcctcc	aattgacact	gctgtgactg	aggaagatca	6780
aatgagtg	ctctctttgg	agccactttc	ccagctcagc	ctctcctctc	ccagtttctt	6840
cccatgggct	actctctg	cctgaaacag	ttctgggtgc	tgatttctgg	cagaagtaca	6900
gcttcacctc	tttcttttcc	ttccacattg	atcaagttgt	tccgctcctg	tggatgggca	6960
cattgccagc	cagtgacaca	atggcttctc	tccttctctc	cttcagcatt	taaaatgtag	7020
acctcttttc	attctccgtt	cctactgcta	tgaggctctg	agaaaccttc	aggcctttga	7080
ggggaaaccc	taaatacaaca	aatgacct	gctattgtct	gtgagaagtc	aagttatcct	7140
gtgtcttagg	ccaaggaacc	tactgtggg	ttcccacaga	ggctaccaat	tacatgtatc	7200
ctactctcgg	ggctaggggt	tggggtgacc	ctgcatgctg	tgtccctaac	cacaagacct	7260
ccttctttct	tcagtgggtg	tctccatgtc	ctttgtacaa	ggagaagaaa	gtaatgacaa	7320
aatacctgtg	gccttggggc	tcaaggaaaa	gaatctgtac	ctgtcctgcg	tgttgaaaga	7380
tgataagccc	actctacagc	tggaggtaag	tgaatgctat	ggaatgaagc	ccttctcagc	7440
ctcctgttac	cacttattcc	cagacaattc	accttctccc	cgcccccatc	cctaggaaaa	7500
gctgggaaca	ggtctatttg	acaagttttg	cattaatgta	aataaattta	acataatttt	7560
taactgcgtg	caaccttcaa	tcctgtctga	gaaaattaaa	tcattttgcc	gatgttatta	7620
tgtcctacca	tagttacaac	cccaacagat	tatatattgt	tagggctgct	ctcatttgat	7680
agacaccttg	ggaaatagat	gacttaaagg	gtcccattat	cacgtccact	ccactcccaa	7740
aatcaccacc	actatcacct	ccagctttct	cagcaaaagc	ttcattttcca	agttgatgtc	7800
attctaggac	cataaggaaa	aatacaataa	aaagccccctg	gaaactaggt	acttcaagaa	7860
gctctagctt	aattttcacc	cccccaaaaa	aaaaaaattc	tcacctacat	tatgctcctc	7920
agcatttggc	actaagtttt	agaaaagaag	aagggtctct	ttaataatca	cacagaaagt	7980
tggggggccc	gttacaactc	aggagtctgg	ctcctgatca	tgtgacctgc	tcgtcagttt	8040
cctttcttgc	caacccaaag	aacatcttcc	ccataggcat	ctttgtccct	tgccccacaa	8100
aaattcttct	ttctctttcg	ctgcagagtg	tagatcccaa	aaattaccca	aagaagaaga	8160
tggaaaagcg	atltgtcttc	aacaagatag	aaatcaataa	caagctggaa	tttgagtctg	8220
cccagttccc	caactggtac	atcagcacct	ctcaagcaga	aaacatgccc	gtcttctctg	8280
gagggaacca	aggcgggccag	gatataactg	acttcacat	gcaatttgtg	tttctctaaa	8340
gagagctgta	cccagagagt	cctgtgctga	atgtggactc	aatccctagg	gctggcagaa	8400
agggaacaga	aagggttttg	agtacggcta	tagcctggac	tttctctgtg	tctacaccaa	8460
tgcccactg	cctgccttag	ggtagtgtga	agaggatctc	ctgtccatca	gccaggacag	8520
tcagctctct	cctttcaggg	ccaatcccca	gcccttttgt	tgagccaggc	ctctctcacc	8580
tctcctactc	acttaaagcc	cgcctgacag	aaaccacggc	cacatttggg	tctaagaaac	8640
cctctgtcat	tcgtctccac	attctgatga	gcaaccgctt	ccctatttat	ttattttatt	8700
gtttgtttgt	tttgattcat	tgggtctaatt	tattcaaagg	gggcaagaag	tagcagtgtc	8760
tgtaaaagag	cctagttttt	aatagctatg	gaatcaattc	aatttggact	ggtgtgctct	8820
ctttaaatca	agtcctttta	ttaagactga	aaatatataa	gctcagatta	tttaaatggg	8880
aatattttata	aatgagcaaa	tatcatactg	ttcaatgggt	ctgaaataaa	cttactgaa	8940
gaaaaaaaaa	aaaggggtctc	tcctgatcat	tgactgtctg	gattgacact	gacagtaagc	9000
aaacaggctg	tgagagttct	tgggactaag	cccactcctc	attgtctgag	gctgcaagta	9060
cctagaaata	tccttggcca	ccgaagacta	tcctcctcac	ccatcccctt	tatttcgttg	9120
ttcaacagaa	ggatattctag	tgcacatctg	gaacaggatc	agctgaagca	ctgcaggagg	9180
tcaggactgg	tagtaaacag	taccatgatt	tatctatcaa	tgcaccaaac	atctgtttgag	9240
caagcgtctat	gtactaggag	ctgggagtac	agagatgaga	acagtcacaa	gtccctcctc	9300
agataggaga	ggcagctagt	tataagcaga	acaaggtaac	atgacaagta	gagtaagata	9360
gaagaacgaa	gaggagtagc	caggaaggag	ggaggagaac	gacataagaa	tcaagcctaa	9420
agggataaac	agaagatttc	cacacatggg	ctgggccaat	tgggtgtcgg	ttacgcctgt	9480

aatcccagca	ctttgggtgg	caggggcaga	aagatcgctt	gagcccagga	gttcaagacc	9540
agcctgggca	acatagttag	actcccatct	ctacaaaaaa	taaataaata	aataaaacaa	9600
tcagccaggc	atgctggcat	gcacctgtag	tcctagctac	ttgggaagct	gacactggag	9660
gattgcttga	gcccagaagt	tcaagactgc	agttagctta	tccgttgacc	tgcaggctga	9720
c						9721

<210> 17
 <211> 12565
 <212> DNA
 <213> Homo sapiens

<400> 17						
gtcgacctgc	agggtcaacgg	atctgagagg	agagtagctt	cttgtagata	acagttggat	60
tatataccat	gtcctgatcc	ccttcacatc	ccaggagagc	agaggtgggc	accctgatag	120
cagcaagcct	gggggctgca	gcttgggtggg	tagaggtact	caggggtaca	gatgtctcca	180
aacctgtcct	gctgccttag	ggagcttcta	ataagttgat	ggatttgggt	aaaattaact	240
tggctacttg	gcaggactgg	gtcagttagg	accaacaaaa	agaagacatc	agattatacc	300
ctgggggttt	gtatttcttg	tgtttctttc	tcttctttgt	actaaaatat	ttacccatga	360
ctgggaaaga	gcaactggag	tctttgtagc	attatcttag	caaaaattta	caaagtttgg	420
aaaacaatat	tgcccatatt	gtgtgggtgtg	tctgtgaca	ctcaggattc	aagtgttggc	480
cgaagccact	aaatgtgaga	tgaagccatt	acaaggcagt	gtgcacatct	gtccacccaa	540
gctggatgcc	aacatttcac	aaatagtgtc	tgcgtgacac	aaatgcagtt	ccaggaggcc	600
caaatgaaaa	tgtttgtact	gaaatttgtt	aaagcttccc	gacaaactag	atttatcagt	660
aaggattgtt	ttctgcaagg	gggatgaaac	ttgtgggggtg	agccatttgg	gctgaggagg	720
agggagggtt	gagctgagaa	atgtggagac	aatttccctt	tagaaggact	gaatctccct	780
gcctctcttg	ggtgcggcag	ccagcaggat	ccaatggtgt	atatgtctcc	ccagctcccc	840
attcagtgat	atcatgtcag	tagcttgaaa	ttatccgtgg	tgggagtatt	atgtcatgga	900
aattggcaaa	tggaaacttt	tattggagat	tcaattgtta	aacttttacc	agcacaacac	960
tgccttgcc	tcagagtcaa	tgaccctatc	caagtttaac	ccatctgtcc	actgtctcca	1020
acacgatctt	tataaaacac	acctgacaac	attacccttt	tattcagttt	tttaaaagat	1080
aagtttccag	ctcatcgggg	tggcttttaa	ggccatttct	cctctggacc	tcacccaact	1140
tttcaaatac	cttttcttac	ccctacctct	aaatgtctact	caaactccag	ccatcctgaa	1200
taataagact	tttgaaaagt	agattatggg	ctgggcacag	tggctcacac	ctgtaatccc	1260
agcatttttg	tgaggccaaga	tgggtggatc	acctgaggtc	gggagttcga	gaccagcctg	1320
actaacatag	tgaacccttg	tctctactaa	aaatacaaaa	ttagttgggg	gtgggtggcac	1380
aagcctgtaa	tcacagctac	tcaggagggt	gaggcagggg	aattgcttga	acctgggagg	1440
cggagggttg	ggtgagccta	gattgtctca	ctgcactcca	gcctgggcaa	caagagcgaa	1500
actccatctc	aaaaaaataa	ataaataaat	aaagtagatt	acatcagata	cctctggcct	1560
agggtgttta	tgaccaactc	tcctgctgag	aataactaga	aaagctagac	aaaacatatt	1620
tccaaaagat	ctctttggag	gcacagagaa	atggccaagg	ctgtaaggaa	ctgcctgagc	1680
ccagagaggt	ggagcccagc	actggtgccc	tttactcctg	gggacatgtg	ctggtttcaa	1740
aaacttcagc	tgagcttttg	agcattcatg	gaacttgggtg	ggggagatga	aatttgtacc	1800
ttaaatcctg	cctacagggg	gggtccctga	taatccccac	ccaatttgga	aatctgggtc	1860
agccttcaca	ggtactgaag	ccctcctctg	aatgatctca	agtcctgcta	gggtagagg	1920
tacctgcttt	tgaagggtc	ctggccctac	tgtgcagcag	gagcaaaagt	gaaccatctc	1980
agggtacaga	taacaatcat	ccagagccct	gaatgacctc	tactgtgctt	aatatatagt	2040
attcagcagt	cagtaaaaag	gatttaggca	catgcaagat	gacctgtgta	tcaggggagaa	2100
ataggcaata	aattgagatc	cagcagggat	ttgaatcatg	gatttgaatc	aggggcagcc	2160
ttcgaaaagaa	ctatggagaa	tatactcaga	tttaaaacat	aagattggaa	tttttggcag	2220
agaactaaca	actgtacaaa	aaaggaacca	aatggaaatc	ctagaactga	aagatgcaat	2280
taaccgatgt	tgagaaatag	ccaacatcta	ttgaacactt	cccatgtgga	cagctgtgct	2340
aaacacttta	caggcatcaa	cataagatgt	gtccccctac	agcagtgcag	tgtccctcct	2400
aagacatgga	cagcctgggt	tccctatctc	tctgcttcat	caaaaccctt	ttacgtgggg	2460
cttagacact	cctgttgtct	ctagtgtcta	gtagcacagg	gctcagcaca	tgggaagccac	2520
tagatacaat	ttgatgacca	ggacctccga	tgaagccat	gggtgctgat	tgggaaggca	2580
ttgtctttta	tgtgctatgg	tcttaaagct	tcattccagga	agcagaactc	gggggggtgct	2640

gaggacccag	aaccgagaat	aagattagtc	agagattttcc	tgtgggcaga	aatcataagg	2700
acgccaactg	tttgggtgag	ataagacgaa	accaagagtg	gacttgtggc	cagaagcgtg	2760
aggaagaggg	agagagcttc	ccttgtcccc	tttcttcctc	tccctaagcc	acagtgattg	2820
acagccccc	cgctttggag	tcagagcagg	cttgagactg	gactgggaaa	ggaggggtggg	2880
tcaggataca	gagcaggaag	gctgggagtg	cagggcagga	gcaaggggct	ggggcattca	2940
ttgtgcctga	tctctcccac	tttacctggg	gtaaagaagc	atatgcaaaa	gccacggtgt	3000
gagtatttcc	caagtgccag	ggtcagggca	tgattcatca	cgtgcagcat	ttcattcaat	3060
ccttatagta	accgatgatg	tggcttctat	tattagctct	atcagataat	gaaactgaga	3120
ccaagacagg	ctctgcacat	tgtgtggggg	aatgacacag	ggggattcag	acctagactc	3180
cataactcct	gccccaggga	ccacccccac	cctcacccctg	tgcatgtcga	caaaggacag	3240
actggggccac	ttctcaggac	acagcgggga	aatgacacag	agcagggagg	ttccaggagc	3300
cccagagcgtc	ttttctccag	gagaatactc	tctgaattca	gactgggggtc	agagaaacat	3360
ttaccacagga	gccgcagtg	gggtggggct	ttttacttga	aacgctgtct	gaaggcagtg	3420
gcaggatgaa	ctctccaccc	taccttggca	agccacttct	cttctgcaat	ctgtaaggac	3480
attgttgaga	gaattatggt	cttccaattc	cggaggggttg	aagaaagaca	aataggagag	3540
aacctatcat	agtcagggtg	tagctgcctt	ctctttcaga	gagtgtgaga	ataaagtgat	3600
acacttgatt	attagcaaat	actttggaaa	ttttaaacgc	taatattcaa	cacactctgg	3660
aagaggcaaaa	taagtagaca	ggttcatata	catcatctcc	ttcagctagt	cctcacaaaa	3720
acaaacaaat	gaataaacia	aattcttctt	tggccctcat	aggaagacac	tgtttcttga	3780
acgtgtttca	aaaaggatgg	gtgactcact	caaggtcaca	ctgtttatga	ggacagtaca	3840
ggaatacaga	catgccattt	tgctgaaaa	aatccatcac	ccagggagggt	gacacaattt	3900
tgcagaaatg	ttctatttcc	tctgaaggat	acattcttta	aacctttggg	aaattcattc	3960
atagtcttcc	tcctttgaag	gattactctc	tggacacaaa	gtgtttgatt	ctgatttggt	4020
ggttggaaga	tgtgttggtt	gagagaaaga	ttctgatttg	ttggttgaaa	atagactcat	4080
caagatcaac	tgctgtagta	gtaaatattt	tgacattttg	tctgtattcc	tgtgctgccc	4140
tcacaagctg	catcaccttg	agtgagtcac	tcatactttt	ttgtttgttt	ttgttttgga	4200
gatggagtct	tactctgttg	cctaggctgg	agtgcgggtg	cgtgatcttg	gctcactgcg	4260
acctccatct	cctgggttca	agtgatectc	ctgcctcagc	ctcccagagta	gctgggatta	4320
caggcacatg	ccaccatccc	tgctaatttt	tgcattttca	gtagagacgg	agtttcacca	4380
tgttggtcag	gttggtcttg	aactcctgac	ctcaggtgat	ccgcccacct	cagcctcccc	4440
aagtgcctggg	attacaggtg	tgagccaccg	tgcccagccc	agccatcatt	tttgaaacac	4500
gtttgagaaa	tagtgtcttc	ctttgagggc	caaggagaca	ttttttttgt	ttatttggtt	4560
gtttttgtga	ggactagctg	aaggggggtga	tgtatattaa	cctgcctact	tatttgccct	4620
ttccagagt	gtgatgaata	ttagggttta	aagtttctga	agcatttggt	aataaagccc	4680
ggggctggag	gtcagaagac	ctggatttct	ctgcatactt	ttgccatcag	caagctgtgt	4740
gaccttggac	agatcccttt	tttgtctaaa	tctttctgag	tcttcttgaa	aacaatgcca	4800
ggttgggaca	ggatgattgc	caagctcccc	tccagctcta	aaacactgca	acgtatgctt	4860
ctgcaccagc	actgtccatc	ctgtagatca	tgcagaaatt	ctcttcaact	ttttcctacc	4920
cataaaatag	gagcatgctt	acctttttcc	taatgttcca	ggccccgggt	ctagatattg	4980
taagtaagga	agttaatgtg	tatcagagcc	cattatgggc	cagaagtctc	cctcttcctt	5040
cctacacctg	cttctccctc	ccctccctcc	ctctttccct	tccttccttc	catccatttg	5100
tgaagaagac	atgatcacc	tcattctgag	agtgaagaga	cagaggctca	actaatgaaa	5160
tgatttggtc	aaggtcacac	gggtggcaca	aggcaagtg	cagaggttga	atthagacct	5220
attcctgtcc	aaatgctgag	tttatgtcat	cgtcccagaga	ccataacttt	aaagatgtaa	5280
gatagtggga	aaagagttga	tttcaaagca	cctctcagaa	ggactcactt	tacatcaggg	5340
gtcagcagac	tcaggccaaa	tccggtccat	tccccgcttt	tgcaaagaaa	gttgtagtgg	5400
aacacagcta	ggcttattga	tttatggatt	gccaacgtcc	ttttgtgaaa	cagacagctg	5460
agctgagtaa	tcgtggcgca	caaaacctaa	aatattttact	atctcgtcct	ttacagaatg	5520
tttgccaatc	tatggtccgg	agtccaaggc	tgtccatttt	tcaaagaaca	caaagtgaca	5580
tgagactgtc	ccatgtgcag	ggagccctat	cattttatta	tgaaaaaacg	gcctttctgc	5640
tcaaattctgt	tttttaaaaa	gtcaacaaac	agactctggg	tacctgtcag	gaacagtagg	5700
gagtttgggt	tccattgtgc	tcttcttccc	aggaactcaa	tgaaggggaa	atagaaatct	5760
taattttggg	gaaattgcac	aggggaaaaa	ggggagggaa	tcagttacaa	cactccattg	5820
cgacacttag	tggggttgaa	agtgacaaca	gcaaggggtt	ctcttttttg	aaatgcgagg	5880
agggtatattc	cgcttctcgc	agtggggcag	gggtggcagac	gcctagcttg	ggtgagtgc	5940
tattttcttta	taaaccacaa	ctctgggccc	gcaatggcag	tccactgctt	gctgcagtca	6000
cagaatggaa	atctgcagag	gcctccgcag	tcacctaatc	actctcctcc	tcttctctgt	6060

ccattcagag	acgatctgcc	gaccctctgg	gagaaaatcc	agcaagatgc	aagccttcag	6120
gtaaggctac	cccaaggagg	agaagggtgag	ggtggatcag	ctggagactg	gaaacatatc	6180
acagctgcc	gggctgccag	gccagagggc	ctgagaactg	ggtttgggct	ggagaggatg	6240
tccattatc	aagaaagagg	ctgttacatg	catgggcttc	aggacttgtg	tttcaaaata	6300
tcccagatgt	ggatagtgcg	accggagggc	tgtcttactt	tcccagagac	tcaggaaccc	6360
agtgagtaat	agatgcatgc	caaggagtgg	gactgcgatt	caggcctagt	tgaatgtgct	6420
gacagagaag	cagagagggg	caccaggggc	acagcccga	ggcccagact	gatatgggca	6480
aggcctgtct	gtgctgacat	gtcggagggt	cccactctcc	agggaccttg	gtttccccgt	6540
ctgtgacatc	tgtgacatga	gagtcacgat	aactccttgt	gtgccttaca	gggttgttgt	6600
gaaaattaaa	tgcacagata	atagcgtaac	agtattccgt	gcattgtaaa	gagcctgaaa	6660
accattatga	tttgaaaatg	gaatcggtct	tgtgagacca	tcactattgt	aaagatgtga	6720
tgtgataga	aatgacagga	ctgcttgtgc	atgccctctg	cagtgtgaca	ttccagcagt	6780
gaaatcatgt	tggggtgact	tctccccac	tctgaccttt	atgtttgtct	gggccgaggc	6840
tgaagtccg	gctctgtggg	tgtatgagtg	acaagtctct	cccttcaga	tatggggact	6900
gtctgcttcc	ctaggttgcc	tctcctgtct	ctgatcagct	agaagctcca	ggagatcctc	6960
ctggaggccc	cagcaggtga	tgtttatccc	tccagactga	ggctaaatct	agaaactagg	7020
ataatcacaa	acaggccaat	gctgccatat	gcaaagcact	ttggtttgcc	tggccacccc	7080
tcgtcgagca	tgtgggtctct	tcagagcacc	gttcagggtg	ggtacagtta	gccacacttc	7140
acaggtgaag	aggtgaggca	caggctccag	gtcaggctgg	ccggagctct	gtttattacg	7200
tctcacagct	ttgagtcctg	ctctcaacca	gagaggccct	ttaccaagaa	gaaaggattg	7260
ggaccagaa	tcaggtcact	ggctgaggta	gagagggaagc	cgggttgttc	ccaagggtag	7320
ctgctcctgc	aggactctga	gcaggtcacc	agctaattgga	ggaaaggctc	tagggaaaga	7380
cccttctggt	ctcagactca	gagcgagtta	gctgcaagggt	gttcctctct	ttgaaacttc	7440
tacctaggtg	ctatggtagc	cactagtctc	agggtggctat	ttaaatttat	acttaaataga	7500
atgaaaatag	aagaaaattt	aaaatccaga	cccttgggtca	cactatccac	atttaaagag	7560
gtcaatagcc	acatgtgggt	agtggccacc	ctattgggca	gtgcagctac	agaacatttt	7620
tgcacccag	aaagtctctt	tggatgttgc	tgtctacag	catgctttgc	tgaacagaa	7680
gtgccttccc	tgggaatctc	agatgggaag	caagtaagga	ggggagtcaa	atgtgggctc	7740
actgtccacc	agctgtgagg	gttgggcctg	cctcttaacc	attgtcagcc	tcagtcttct	7800
catccatgca	tgccgtgggt	atactaaaat	actatacccc	tgggaagagct	ggatgcaaat	7860
ttgacaagtt	ctgggggaca	cagggaagggtg	ccaagcacia	ggctgggcac	atgggtggctg	7920
tgcactacag	ctgagtcctt	ttccttttca	gaatctggga	tgttaaccag	aagaccttct	7980
atctgaggaa	caaccaacta	gttgctggat	acttgcaagg	accaaattgtc	aatttagaag	8040
gtgagtgggt	gccaggaaag	ccaatgtatc	tgggcacac	gtcactttgc	ccgtctgtct	8100
gcagcagcat	ggcctgcctg	cacaaacct	aggtgcaatg	tcctaactct	tgttgggtct	8160
ttgtattcaa	gtttgaagct	gggagggcct	ggctactgaa	gggcacatat	gagggtagcc	8220
tgaagagggt	gtggagagggt	agagtctagg	tcagagggtca	gtgcctatag	gcaagtgggtc	8280
ccagggccac	agctgggaag	ggcaaatacc	agaaggcaag	gttgaccatt	cccttctctca	8340
agtgcctatt	aaggctccat	gttcctatgt	tgttcaaacc	ctaactcaat	cccaaattaa	8400
tccaccatgt	ataaggttga	gctatgtctc	ttattcctgg	acaccatact	cagccatata	8460
tgggtccacac	attaacagct	ggatgacctt	gaagaagctt	cacccactct	gttcctcagc	8520
tttcccttca	gtgggatgat	atcaactgga	caacaggatg	tgcgattctt	ttagttccag	8580
ccttccagga	tgttttctact	cccctgtttg	ttgttgtagg	atggtattac	ctccaccttc	8640
ccaccttccc	tatgccctgg	ttctgtctcc	tgtgcctcgc	tctgaaagtg	gatgagacct	8700
acaattcctg	tcctggtagt	tctcctaata	aacacactga	agcacgagga	agctgagatt	8760
tttgttgcta	catgagagca	tggaggcctc	ttaggggagag	aggaggttca	gagactccta	8820
ggctcctggt	ggagccccac	tcattggcctt	gttcattttc	cctgccccctc	agcaacactc	8880
ctattgacct	ggagcacagg	tatcctgggg	aaagtgagggt	aaatatggac	atcacatgga	8940
acaacatcca	ggagactcag	gcctctagga	gtaactgggt	agtgtgcata	ctggggaaag	9000
tgagggaat	atggacatca	catggaacaa	catccaggag	actcaggcct	ctaggagtaa	9060
ctgggtagtg	tgcactctgg	ggaaagtgag	ggaaatatgg	acatcacatg	gaacaacatc	9120
caggagactc	aggcctctag	gagtaactgg	gtagtgtgca	tcctggggaa	agtgagggaa	9180
atatggacat	cacatggaac	aacatccagg	agactcaggc	ctctaggagt	aactgggtag	9240
tgtgcttgggt	ttaatcttct	attacctg	agaccaggaa	gatgagacct	ctctgccctt	9300
ctgacctcgg	gatttttagtt	ttgtggggac	caggggagat	agaaaaatac	ccgggggtctc	9360
ttcattattg	ctgcttccctc	ttctattaac	ctgacctctc	cctctgttct	ttcccagaaa	9420
agatagatgt	ggtaccatt	gagcctcatg	ctctgttctt	gggaatccat	ggagggaaga	9480

tgtgcctgtc	ctgtgtcaag	tctgggtgatg	agaccagact	ccagctggag	gtaaaaacat	9540
gctttggatc	tcaaatcacc	ccaaaaccca	gtggcttgaa	acaacccaaa	ttttttctta	9600
tgattctgtg	ggttgaccag	gattagctgg	gtagttctgt	tccatgtggt	ggaacatgct	9660
ggggtcactt	tggaagctgc	attcagcaga	gtgccaggct	tgcgctgggc	atccaagggtg	9720
gtccctcadc	ctccaggctc	tctttccatg	tgatctctca	gtgttttaaga	gttagttgga	9780
gcttccctac	agcatggcgg	ctgacttcca	aaagggatta	ttccaaaaag	agcctcaaca	9840
tgcaggcgct	tattatgact	tctgcttgca	tcctcctatt	ggccaaagcc	agtcacgtgg	9900
ctaagtctag	ccccctgtga	gaggagactg	cataagagtg	tgaacaccag	gagacacggt	9960
cactgggggc	caccactgta	accatctacc	acaggacctg	aatctctgtg	tgctactccc	10020
ttgtctcaag	gccccctac	ccacgcagac	ctgctgtctt	ctagcaaagc	ccatcctcag	10080
gacctttctc	ttccaatcct	tattgactca	aattgattag	ttggtgctcc	accagagacc	10140
ctgtgctcct	ttatctcatg	taatgttaat	gggtttccca	gccctgggaa	aacatggcct	10200
tgtctcaggg	gcttgctgga	tgcaacctta	acctcaatgt	gagtggccat	actgtggcac	10260
tgtcccatcc	ctcaccaggg	acactgttct	ggaggggtgac	tgctgttctt	gtgaggagtg	10320
gggatggcta	ggacattgca	tggaacacac	caccacccca	tcttctcaga	gctcaaacc	10380
tgacagaaca	ccagctccac	aggccttggc	ttctgctgat	ggtgccgtgt	atttaccaga	10440
cttagtggtc	caaggccaga	gtggcagatt	tcccaaagtc	aaggtgtgac	agtgggacag	10500
cctctttgtg	tctttgctgt	cctaagaaac	ctgggccagg	ccaggcgacg	tggtcacgc	10560
cttgtaatcc	cagcactttg	agaggccaag	gtgggcagat	cacgagggtca	ggagtttgag	10620
accagcctgg	ccaacattgg	tgaaaccctg	tctctattaa	aaatagaaaa	cattagacag	10680
gtgtgggtgt	gcatgcctgt	aatcccagct	actcaggagg	ctgaggcagg	agaatcgctt	10740
gaaccacagga	ggtggagggt	gcagtgcagc	gagattgtgc	cactgcactc	cagcctaggc	10800
gacagagcaa	gactccgtct	cgggaaaatt	aattaataaa	taaataaacc	taggtcccag	10860
agtcccacag	aatggcagac	aggagcacct	gggggctttt	agggtatggc	atttcccctg	10920
tactaactct	gggctgtcca	gaggcgattt	catggcgctg	agtggagagg	gaggcagcac	10980
aggacttctt	aggcctcagc	tctcacctgc	ccatcttttg	atttccaggc	agttaacatc	11040
actgacctga	gcgagaacag	aaagcaggac	aagcgcttcg	ccttcatccg	ctcagacagt	11100
ggccccacca	ccagttttga	gtctgccgcc	tgccccgggt	ggttcctctg	cacagcgatg	11160
gaagctgacc	agcccgtcag	cctcaccaat	atgcctgacg	aaggcgctcat	ggtcacccaa	11220
ttctacttcc	aggaggacga	gtagtactgc	ccaggcctgc	ctgttcccat	tcttgcatgg	11280
caaggactgc	agggactgcc	agtccccctg	ccccagggtc	cccggctatg	ggggcactga	11340
ggaccagcca	ttgaggggtg	gaccttcaga	aggcgctcaca	acaacctggt	cacaggactc	11400
tgcttctctt	tcaactgacc	agcctccatg	ctgcctccag	aatgggtctt	ctaagtgtgtg	11460
aatcacagca	cagcagcccc	tgacaaaagc	ccttccatgt	cgctcttgca	ttcaggatca	11520
gaacccgacc	acctgcccc	cctgctctcc	tcttgccact	gcctcttctt	ccctcattcc	11580
accttcccat	gccctggatc	catcaggcca	cttgatgacc	cccaaccaag	tggtctccac	11640
accctgtttt	acaaaaaaga	aaagaccagt	ccatgagggg	ggtttttaag	ggtttgtgga	11700
aaatgaaaat	taggatttca	tgattttttt	ttttcagtc	ccgtgaagga	gagcccttca	11760
tttgagagatt	atgttctttc	ggggagaggc	tgaggactta	aaatattcct	gcatttgtga	11820
aatgatgggtg	aaagtaagtg	gtagcttttc	ccttcttttt	cttctttttt	tgtgatgtcc	11880
caacttgtaa	aaattaaaag	ttatggtact	atgttagccc	cataattttt	tttttctttt	11940
taaaacactt	ccataatctg	gactcctctg	tccaggcact	gctgcccagc	ctccaagctc	12000
catctccact	ccagattttt	tacagctgcc	tgcagtactt	tacctcctat	cagaagtttc	12060
tcagctccca	aggctctgag	caaagtgtgg	tcttgggggt	tctttcttcc	tctgctgaag	12120
gaataaattg	ctccttgaca	ttgtagagct	tctggcactt	ggagacttgt	atgaaagatg	12180
gctgtgcctc	tgctgtcttc	cccaccaggc	tgggagctct	gcagagcagg	aaacatgact	12240
cgtatatgtc	tcaggctcct	gcagggccaa	gcacctagcc	tcgctcttgg	cagggtactca	12300
gcgaatgaat	gctgtatatg	ttgggtgcaa	agttccctac	ttcctgtgac	ttcagctctg	12360
ttttacaata	aaatcttgaa	aatgcctata	ttgttgacta	tgtccttggc	cttgacaggc	12420
tttggtgata	gagtgtctgag	gaaactgaaa	gaccaatgtg	tyttycttac	cccagaggct	12480
ggcgccctgg	ctcttctctg	agagttcttt	tcttccctca	gcctcactct	ccctggataa	12540
catgagagca	aatctctctg	cgggg				12565

<210> 18
 <211> 25
 <212> DNA

<213> Homo sapiens
 <400> 18
 tgtacctaag cccacccttt agagc 25

 <210> 19
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 19
 tggcctccag aaacctccaa 20

 <210> 20
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 20
 gctgatattc tgggtgggaaa 20

 <210> 21
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 21
 ggcaagagca aaactctgtc 20

 <210> 22
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Primer

 <400> 22
 gggatgttaa ccagaagacc ttctatct 28

 <210> 23
 <211> 27
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 23
caaccactca ccttctaaat tgacatt 27

<210> 24
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Probe

<400> 24
aacaaccaac tagttgctgg atacttgcaa 30

<210> 25
<211> 27
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Probe

<400> 25
acaaccaact agttgccgga tacttgc 27

<210> 26
<211> 4
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative
zinc finger peptide

<400> 26
Thr Lys Pro Arg
1

<210> 27
<211> 5
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative
zinc finger peptide

<400> 27

Ile Thr Gly Ser Glu
1 5

<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
zinc finger peptide

<400> 28
Val Thr Lys Phe Tyr Phe
1 5

<210> 29
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative
zinc finger peptide

<400> 29
Val Thr Asp Phe Tyr Phe
1 5